32. (New) The process according to Claim 8, wherein said film has a thickness of from 30 to 500 micron.

33. (New) The process according to Claim 17, wherein said heating is from 100 to 165°C.

34. (New) The process according to Claim 17, wherein said removing epichlorohydrin is carried out under reduced pressure.

35. (New) The process according to Claim 17, wherein said film has a thickness of from 30 to 500 micron.--

## REMARKS

Claims 1-25 have been amended to place them in more readable form. Claim 1 has been amended to recite "consisting essentially of" in place of "which comprises". Claims 8 and 17 have been amended to recite that (B) removing epichlorohydrin from the reaction solution is accomplished by coating a film of the reaction solution on a substrate and heating. Basis for this limitation may be found on page 18 of the specification. New Claims 26-35 have been added to preferred embodiments for epichlorohydrin removal. Basis for the new claims may be found on page 18 of the specification. No new matter has been added into the amended claims or new claims.

## REQUEST FOR RECONSIDERATION

Claims 1-35 are active in the case.

Claims 8-16 are rejected under 35 U.S.C. §102(b) as being anticipated by Ikeda et al.

It is submitted that Claim 8, as amended, and Claims 9-16 and 30-32, dependent thereon, distinguish over Ikeda et al for the following reasons. Ikeda et al show in the examples the removal of epichlorohydrin by distilling it off the reaction solution under

reduced pressure at a temperature from 50-60°C. There is no teaching in Ikeda et al of removing epichlorohydrin by coating a film of reaction solution on a substrate and heating. Nor is there any disclosure in Ikeda et al for the limitation in Claim 30 that the heating is from 100-165°C. Nor is there any disclosure in Ikeda et al for the limitation in Claim 31 that the removal step of Claim 8 is carried out under reduced pressure. Finally, there is no disclosure in Ikeda et al for the limitation in Claim 32 that the thickness of the film is from 30-500 microns. Therefore, it is submitted that Claims 8-16 and 30-32 are neither anticipated by nor obvious over Ikeda et al.

Claims 1-7 and 17-25 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ikeda et al.

It is submitted that Claims 1-7 and Claims 17-25, as amended, and new Claims 26-29 and 33-35 distinguish over Ikeda et al for the following reasons. Claims 1 has been amended to recite "consisting essentially of" in order to make it clear that there is no seeding step in the claim. The Examiner admits that Claim 1 does not recite a seeding step, but indicates that recrystallization may be achieved both with or without seeding and refers to prior art descriptions in columns 1 and 2 of Ikeda et al. However, Applicants can find no description of crystallizing without a seeding step in the disclosure of Ikeda et al which further involves the limitations of (C) of Claim 1 of "gradually cooling the solution of (B) at a cooling rate with 20°C/hr to crystallize tris-(2,3-epoxypropyl)-isocyanurate and filtering to obtain crystals of tris-(2,3-epoxypropyl)-isocyanurate. Therefore, Claims 1-7 distinguish over Ikeda et al. Claims 26-29, which contain limitations on the removal of epichlorohydrin of the same scope as those discussed with regard to the amendment of Claim 8 and the addition of new Claims 30-32, discussed above, also distinguish over Ikeda et al for the reasons set forth above.

Claim 17, as amended, and Claims 18-25 and 33-35, dependent thereon, also contain limitations on the removal of epichlorohydrin, as discussed above with regard to Claim 8 and Claims 30-32. Since Ikeda et al does not show the particulars of epichlorohydrin removal as set forth in Claim 17, as amended, and Claims 18-25 and 33-35, dependent thereon, it is submitted that Claims 17-25 and 33-35 distinguish over Ikeda et al for the reasons discussed above with regard to amended Claim 8 and new Claims 30-32.

Claims 1-25 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 3-11 of Ikeda et al. It is submitted that Claims 1-25, as amended, and new Claims 26-35 distinguish over Ikeda et al for the reasons discussed above and the double patenting rejection is moot. Further, since Ikeda et al was issued as a patent more than one year prior to the filing date of the present application, a Terminal Disclaimer would be ineffective to remove Ikeda et al as a reference under these circumstances.

It is submitted that Claims 1-35 are allowable and such action is respectfully requested.

Respectfully submitted,

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IN THE CLAIMS

--1. (Amended) A process for producing ß-form tris-(2,3-epoxypropyl)-isocyanurate crystals containing from 2 to 15 wt% of α-form tris-(2,3-epoxypropyl)-isocyanurate in the interior of the crystals, [which comprises the following steps (A), (B), (C) and (D)] consisting essentially of:

(A) [a step of ]reacting cyanuric acid with epichlorohydrin to form an addition product of cyanuric acid and epichlorohydrin[, followed by dehydrochlorination] and dehydrochlorinating said product to obtain a reaction solution containing tris-(2,3-epoxypropyl)-isocyanurate,

(B) [a step of ]removing epichlorohydrin from [the] said reaction solution [containing tris-(2,3-epoxypropyl)-isocyanurate obtained in step (A),] and dissolving [the obtained] tris-(2,3-epoxypropyl)-isocyanurate in a solvent,

(C) [a step of ]gradually cooling the [liquid obtained in step] solution of (B) at a cooling rate within 20 °C/hr [for crystallization, followed by filtration] to crystallize tris-(2,3-epoxypropyl)-isocyanurate and filtering to obtain crystals of tris(2,3-epoxypropyl)-isocyanurate, and

(D) [a step of] washing and drying [the] said crystals[ obtained in step (C)].

2. (Amended) The process according to Claim 1, wherein [step] (A) comprises [is a step of] reacting (a) 1 mol of cyanuric acid, (b) from 5 to 180 mols of epichlorohydrin and (c) a catalyst of from 0.001 to 0.1 mol of at least one compound selected from the group consisting of a tertiary amine, a quaternary ammonium salt, a quaternary ammonium base, a tri-substituted phosphine and a quaternary phosphonium salt[, as a catalyst,] to obtain [a] said reaction solution, adding from 2 to 6 mols of an alkali metal hydroxide or an alkali metal alcoholate to [the] said reaction solution for dehydrochlorination, and [then] removing the resulting alkali metal salt to obtain [a] said reaction solution containing tris-(2,3-epoxypropyl)-isocyanurate.

3. (Amended) The process according to Claim 1, wherein [the] said solvent [in which tris-(2,3-epoxypropyl)-isocyanurate is dissolved in step (B)] is acetonitrile, toluene, dioxane or dimethylformamide.

4. (Amended) The process according to Claim 1, wherein ultrasonic waves are applied to [the liquid] said solution in said [the process of] gradually cooling [the liquid] said solution in [step] (C).

5. (Amended) The process according to Claim 1, wherein [the] said washing in [step] (D) is carried out by using a solvent capable of providing a solubility of at least 0.5 g/100 g at 20°C to α-form tris-(2,3-epoxypropyl)-isocyanurate and a solubility of less than 0.5 g/100 g at 20°C to ß-form tris-(2,3-epoxypropyl)-isocyanurate, in an amount of from 0.5 to 10 times by weight relative to the ß-form tris-(2,3-epoxypropyl)-isocyanurate crystals.

6. (Amended) The process according to Claim 1, wherein the average particle size of [the] said crystals obtained in [step] (C) is from 20 to 500 μm, and [the] said drying in [step] (D) is carried out under atmospheric pressure or under reduced pressure in a gas stream at a temperature of from 120 to 140°C.

7. (Amended) The process according to Claim 1, wherein the average particle size of [the] said crystals obtained in [step] (C) is from 10 to 20 μm, and [the] said drying in [step] (D) is carried out under atmospheric pressure or under reduced pressure in a gas stream at a temperature of from 40 to 120°C.

8. (Amended) A process for producing ß-form tris-(2,3-epoxypropyl)-isocyanurate crystals containing from 2 to 15 wt% of α-form tris-(2,3-epoxypropyl)-isocyanurate in the interior of the crystals, [which comprises the following steps (A), (B), (C') and (D)] comprising:

(A) [a step of] reacting cyanuric acid with epichlorohydrin to form an addition product of cyanuric acid and epichlorohydrin[, followed by dehydrochlorination] and dehydrochlorinating said product to obtain a reaction solution containing tris-(2,3-epoxypropyl)-isocyanurate,

(B) [a step of] removing epichlorohydrin from [the] said reaction solution [containing tris-(2,3-epoxypropyl)-isocyanurate obtained in step (A),] by coating a film of said reaction solution on a substrate and heating and dissolving [the obtained] tris-(2,3-epoxypropyl)-isocyanurate in a solvent,

(C') [a step of ]adding seed crystals to the [liquid obtained in step] solution of (B) at a temperature lower by from 5 to 20°C than the temperature at which [the liquid] said solution forms a saturated solution, and gradually cooling [the liquid] said solution at a cooling rate within 20 °C/hr to crystallize tris-(2,3-epoxypropyl)-isocyanurate, [for crystallization, followed by filtration] and filtering to obtain crystals of tris-(2,3-epoxypropyl)-isocyanurate, and

(D) [a step of ]washing and drying [the] said crystals [obtained in step (C')].

9. (Amended) The process according to Claim 8, wherein [step] (A) [is a step of] comprises reacting (a) 1 mol of cyanuric acid, (b) from 5 to 180 mols of epichlorohydrin and

(c) a catalyst of from 0.001 to 0.1 mol of at least one compound selected from the group consisting of a tertiary amine, a quaternary ammonium salt, a quaternary ammonium base, a tri-substituted phosphine and a quaternary phosphonium salt[, as a catalyst,] to obtain a reaction solution, adding from 2 to 6 mols of an alkali metal hydroxide or an alkali metal alcoholate to [the] said reaction solution for dehydrochlorination, and [then] removing the resulting alkali metal salt to obtain [a] said reaction solution containing tris-(2,3-epoxypropyl)-isocyanurate.

10. (Amended) The process according to Claim 8, wherein [the] said solvent [in which tris-(2,3-epoxypropyl)-isocyanurate is dissolved in step (B)] is acetonitrile, toluene, dioxane or dimethylformamide.

11. (Amended) The process according to Claim 8, wherein [the ] said addition of said seed crystals in [step] (C') satisfies the following formulae (1) and (2):

$$1 \times 10^{10} \geqq T \geqq 1 \times 10^{2} \qquad (1)$$

$$T = 1.4 \times 10^{12} (m/(M \times D^{3})) \qquad (2)$$

wherein T is the number of said seed crystals added per the weight of tris-(2,3-epoxypropyl)-isocyanurate in [the] said reaction solution (number/g), m is the weight (g) of said seed crystals added, D is the average particle size of said seed crystals which is from 2 to 300 μm, and M is the weight (g) of tris-(2,3-epoxypropyl)-isocyanurate in the reaction solution.

12. (Amended) The process according to Claim 8, wherein [the] said seed crystals added in [step] (C') [is] are ß-form tris-(2,3-epoxypropyl)-isocyanurate crystals, or a mixture of ß-form tris-(2,3-epoxypropyl)-isocyanurate crystals and α-form tris-(2,3-epoxypropyl)-isocyanurate crystals.

13. (Amended) The process according to Claim 8, wherein ultrasonic waves are applied to [the liquid] said solution in [the process of] said gradually cooling [the liquid] said solution in [step] (C').

14. (Amended) The process according to Claim 8, wherein [the] said washing in [step] (D) is carried out by using a solvent capable of providing a solubility of at least 0.5 g/100 g at 20°C to α-form tris-(2,3-epoxypropyl)-isocyanurate and a solubility of less than 0.5 g/100 g at 20°C to ß-form tris-(2,3-epoxypropyl)-isocyanurate, in an amount of from 0.5 to 10 times by weight relative to the ß-form tris-(2,3-epoxypropyl)-isocyanurate crystals.

15. (Amended) The process according to Claim 8, wherein the average particle size of [the] said crystals obtained in [step] (C') is from 20 to 500 μm, and [the] said drying in [step] (D) is carried out under atmospheric pressure or under reduced pressure in a gas stream at a temperature of from 120 to 140°C.

16. (Amended) The process according to Claim 8, wherein the average particle size of [the] said crystals obtained in [step] (C') is from 10 to 20 μm, and [the] said drying in [step] (D) is carried out under atmospheric pressure or under reduced pressure in a gas stream at a temperature of from 40 to 120°C.

17. (Amended) A process for producing ß-form tris-(2,3-epoxypropyl)-isocyanurate crystals containing from 2 to 15 wt% of α-form tris-(2,3-epoxypropyl)-isocyanurate in the interior of the crystals, [which comprises the following steps (A), (B), (C") and (D)] comprising:

(A) [a step of ]reacting cyanuric acid with epichlorohydrin to form an addition product of cyanuric acid and epichlorohydrin[, followed by dehydrochlorination] and dehydrochlorinating said product to obtain a reaction solution containing tris-(2,3-epoxypropyl)-isocyanurate,

(B) [a step of ]removing epichlorohydrin from [the] said reaction solution [containing tris-(2,3-epoxypropyl)-isocyanurate obtained in step (A)] by coating a film of said reaction solution on a substrate and heating and dissolving [the obtained] tris-(2,3-epoxypropyl)-isocyanurate in a solvent,

(C") [a step of ]heating the [liquid obtained in step] solution of (B) to a temperature of at least the temperature at which [the liquid] said solution forms a saturated solution, thereafter cooling [the liquid] said solution to a temperature lower by from 5 to 20°C than the temperature at which [the liquid] said solution forms a saturated solution, and adding seed crystals thereto, and then gradually cooling [the liquid] said solution at a cooling rate within 20°C/hr [for crystallization, followed by filtration] to crystallize tris-(2,3-epoxypropyl)-isocyanurate and filtering to obtain crystals of tris-(2,3-epoxypropyl)-isocyanurate, and

(D) [a step of ]washing and drying [the] said crystals [obtained in step (C")].

18. (Amended) The process according to Claim 17, wherein [step] (A) [is a step of] comprises reacting (a) 1 mol of cyanuric acid, (b) from 5 to 180 mols of epichlorohydrin and (c) a catalyst of from 0.001 to 0.1 mol of at least one compound selected from the group consisting of a tertiary amine, a quaternary ammonium salt, a quaternary ammonium base, a tri-substituted phosphine and a quaternary phosphonium salt[, as a catalyst,] to obtain a reaction solution, adding from 2 to 6 mols of an alkali metal hydroxide or an alkali metal alcoholate to [the] said reaction solution for dehydrochlorination, and then removing the resulting alkali metal salt to obtain [a] said reaction solution containing tris-(2,3-epoxypropyl)-isocyanurate.

19. (Amended) The process according to Claim 17, wherein [the] said solvent [in which tris-(2,3-epoxypropyl)-isocyanurate is dissolved in step (B)] is acetonitrile, toluene, dioxane or dimethylformamide.

20. (Amended) The process according to Claim 17, wherein [the] said addition of said seed crystals in [step] (C") satisfies the following formulae (1) and (2):

$$1 \times 10^{10} \geqq T \geqq 1 \times 10^{2} \qquad (1)$$

$$T = 1.4 \times 10^{12} (m/(M \times D^{3})) \qquad (2)$$

wherein T is the number of said seed crystals added per the weight of tris-(2,3-epoxypropyl)-isocyanurate in [the] said reaction solution (number/g), m is the weight (g) of said seed crystals added, D is the average particle size of seed crystals which is from 2 to 300 μm, and M is the weight (g) of tris-(2,3-epoxypropyl)-isocyanurate in the reaction solution.

21. (Amended) The process according to Claim 17, wherein [the] said seed crystals added in [step] (C") [is] are ß-form tris-(2,3-epoxypropyl)-isocyanurate crystals, or a mixture of ß-form tris-(2,3-epoxypropyl)-isocyanurate crystals and α-form tris-(2,3-epoxypropyl)-isocyanurate crystals.

22. (Amended) The process according to Claim 17, wherein ultrasonic waves are applied to [the liquid] said solution in the process of gradually cooling [the liquid] said solution in [step] (C").

23. (Amended) The process according to Claim 17, wherein [the] said washing in [step] (D) is carried out by using a solvent capable of providing a solubility of at least 0.5 g/100 g at 20°C to α-form tris-(2,3-epoxypropyl)-isocyanurate and a solubility of less than 0.5 g/100 g at 20°C to ß-form tris-(2,3-epoxypropyl)-isocyanurate, in an amount of from 0.5 to 10 times by weight relative to the ß-form tris-(2,3-epoxypropyl)-isocyanurate crystals.

24. (Amended) The process according to Claim 17, wherein the average particle size of [the] said crystals obtained in [step] (C") is from 20 to 500 μm, and [the] said drying in [step] (D) is carried out under atmospheric pressure or under reduced pressure in a gas stream at a temperature of from 120 to 140°C.

25. (Amended) The process according to Claim 17, wherein the average particle size of [the] said crystals obtained in [step] (C") is from 10 to 20 μm, and [the] said drying in [step] (D) is carried out under atmospheric pressure or under reduced pressure in a gas stream at a temperature of from 40 to 120°C.--

Claims 26-35 (New).